PHYSICS (PHY)

PHY 100 Elements of Physics (4 CR.)
Covers basic concepts of physics, including Newtonian mechanics, properties of matter, heat transfer, waves, fundamental behavior of gases, optics, ionizing radiation, and fundamentals of electricity and magnetism. The assignments in the course require college-level reading fluency, coherent written communication, application of arithmetic, exponents, and algebraic skills such as solving for an unknown variable in an equation, and finding the slope and intercept from the equation of a line. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.
This is a Passport and UCGS transfer course.
Credit for Prior Learning available for this course. More information at https://www.nvcc.edu/admissions/cpl.html.

PHY 150 Elements of Astronomy (4 CR.)
Covers history of astronomy and its recent developments. Stresses the use of astronomical instruments and measuring techniques and includes the study and observation of the solar system, stars, and galaxies. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.
Credit for Prior Learning available for this course. More information at https://www.nvcc.edu/admissions/cpl.html.

PHY 201 General College Physics I (4 CR.)
Covers classical mechanics and thermodynamics. Includes kinematics, Newton's laws of motion, work, energy, momentum, rotational kinematics, dynamic and static equilibrium, elasticity, gravitation, fluids, simple harmonic motion, calorimetry, ideal gas law, and the laws of thermodynamics. Part I of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.
Prerequisite(s) MTH 161 or MTH 167 with a grade of C or better
This is a UCGS transfer course.
Credit for Prior Learning available for this course. More information at https://www.nvcc.edu/admissions/cpl.html.

PHY 202 General College Physics II (4 CR.)
Covers waves, electromagnetism, optics, and modern physics. Includes mechanical waves, sound, electrostatics, Ohm's law and DC circuits, magnetic forces and magnetic fields, electromagnetic induction, ray optics, wave optics, and selected topics of modern physics. Part II of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.
Prerequisite(s) PHY 201 with a grade of C or better and MTH 162 or MTH 167 with a grade of C or better
This is a UCGS transfer course.
Credit for Prior Learning available for this course. More information at https://www.nvcc.edu/admissions/cpl.html.

PHY 241 University Physics I (4 CR.)
Covers classical mechanics and thermodynamics. Includes kinematics, Newton's laws of motion, work, energy, momentum, rotational kinematics, dynamics and static equilibrium, elasticity, gravitation, fluids, simple harmonic motion, calorimetry, ideal gas law, and the laws of thermodynamics. Part I of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.
Prerequisite(s) MTH 263 with a grade of C or better
This is a UCGS transfer course.
Credit for Prior Learning available for this course. More information at https://www.nvcc.edu/admissions/cpl.html.

PHY 242 University Physics II (4 CR.)
Covers waves, electromagnetism and optics. Includes mechanical waves and sound, electrostatics, Ohm's law and DC circuits, magnetic forces and magnetic fields, electromagnetic induction, AC circuits, ray optics, and wave optics. Part II of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.
Prerequisite(s) PHY 241 with a grade of C or better and MTH 264 with a grade of C or better
This is a UCGS transfer course.
Credit for Prior Learning available for this course. More information at https://www.nvcc.edu/admissions/cpl.html.

PHY 243 Modern Physics (3 CR.)
Covers principles of modern physics including in-depth coverage of relativity, quantum physics, solid state, and nuclear physics. Lecture 3 hours.
Prerequisite(s) PHY 242 with a grade of C or better or departmental approval

PHY 244 Modern Physics Lab (1 CR.)
Introduces various methods and procedures used in modern physics experiments. Covers the general experimentation and modeling techniques for topics such as an introduction to the theory of relativity, elementary quantum theory, and its applications to atomic and nuclear physics. Laboratory: 3 hours. Total 3 hours per week.
Corequisite(s) PHY 243